

ABSTRACT

The invention is a composite sheet used to bond semiconductor elements and circuit substrates together, containing a resin with magnetic and conductive particles. The invention includes processes for making the sheet and for using the sheet. The sheet includes a binder which contains photocuring and thermosetting components, and a fibrous filler which is both conductive and magnetic. A semicured conductive sheet can be obtained by light irradiation of the sheet. Thermocompression can be used for producing a semiconductor package. Reductions in conductive part pitch are achieved by adhering a noble metal onto the surface of the sheet. Thermal conductivity can be improved by inclusion of a filler having high thermal conductivity. Projections of binder containing magnetic fibrous fillers allows stable electrical conduction. Dispersion of fine particles in the binder inhibits deterioration of the sheets insulating abilities.